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ABSTRACT

This report discusses guidelines for developing drug prevention programs. It reflects knowledge acquired in developing and implementing Project ALERT, an adolescent drug prevention program currently being evaluated with more than 6,500 students in California and Oregon schools. The guidelines discussed are based on information about the effectiveness of different prevention models, the developmental capabilities of different age groups, the patterns of drug use over time, and factors that affect successful program delivery. The report begins by identifying the information approach and the general skills approach to drug prevention as two models that have not seemed to work well. An approach which holds more promise is the behaviorally-based social influence approach, which addresses the major influences promoting initiation into drug use: pressure from others to use drugs and the child's own belief that using drugs will yield positive social outcomes. The report considers when drug prevention education should be offered, what substances should be targeted by drug prevention programs, how interested students will be in drug education, and what assistance teachers will need in implementing drug prevention programs. Four pages of references are included. (NB)

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A RAND NOTE

Toward More Effective Drug Prevention Programs

Phyllis L. Ellickson, Abby E. Robyn

October 1987

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PREFACE

This Note, an expanded version of an article that appeared in the *California School Boards* journal, discusses guidelines for developing drug prevention programs. It reflects knowledge acquired in developing and implementing Project ALERT, an adolescent drug prevention program currently being evaluated with over 6500 students in California and Oregon schools. The guidelines are based on information about the effectiveness of different prevention models, the developmental capabilities of different age groups, the patterns of drug use over time, and factors that affect successful program delivery. The Note should be of interest to agencies and individuals responsible for designing or adopting drug prevention policies and programs.

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We are grateful to the Conrad N. Hilton Foundation for their support of our research on adolescent drug prevention. Their ongoing commitment to this area has helped define the nature of promising drug prevention programs. Our thanks also to Joan Petersilia, who greatly enriched this Note by her review comments. Ethel Sniderman's careful typing and Helen Turin's precise editing enhanced the final product.

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TOWARD MORE EFFECTIVE DRUG PREVENTION PROGRAMS[1]

While preventing drug use has become an important priority for schools, school officials have little information about how to develop effective programs. Several states mandate that drug education "shall be offered" but leave the choice of when to offer it and what topics or skills to address to the discretion of local school districts. The "Drug-Free Schools and Communities Act of 1986" (PL99-570), which provides funds for school-based prevention efforts, has given additional impetus to the search for viable and effective curricula. What kind of programs work and for what age groups? Which substances present the greatest risk to young people? Considering questions like these can help districts establish their priorities and set a realistic and balanced agenda for their schools.

WHAT WORKS?

First of all, which approaches are likely to yield results? Although we are just beginning to have an idea about what might be effective in preventing adolescent drug use, we have a much clearer idea of what doesn't work (Polich, Ellickson, Reuter, and Kahan, 1984). Two approaches popular in the past have shown little success: (1) the information approach, which seeks to help young people understand the legal and medical consequences of drug use; and (2) the general skills approach, which helps children acquire a more positive self-image by improving their skills in decisionmaking, communication, and values clarification.

The information model assumes that adolescents use drugs because they lack knowledge about their negative effects; once they receive this information, their attitudes toward drugs should change and their use of drugs should be reduced. Informational programs frequently do increase students' knowledge about drugs (and sometimes their curiosity), but

[1]This Note presents an expanded version of an article originally appearing in *California School Boards*, Spring 1987.

they have been less successful in changing children's attitudes about using them and not at all successful in changing drug use behavior (Blum, Blum, and Garfield, 1976; Goodstadt, 1978; Hanson, 1980; Kinder, Pape, and Walfish, 1980; Plant, 1980; Swisher, 1974).

Why have they failed? Experience tells us that millions of adults have continued to smoke more than 20 years after the Surgeon General's report about the damaging consequences of tobacco. In other words, knowledge alone rarely changes behavior. Moreover, many of the early drug prevention efforts exaggerated the harmful effects of drugs and, not surprisingly, adolescents dismissed both the inaccurate appeals and those who articulated them as lacking in credibility (Kinder, Pape, and Walfish, 1980).

The next generation of programs, which gained popularity in the 1970s, assumed that children use drugs to compensate for a lack of self-esteem, or because they lack adequate tools for making rational decisions. These programs sought to enhance youngsters' sense of self-worth, improve their decisionmaking skills, and clarify the relationship between values and actual decisions. The results from these general skill programs tend to be ambiguous, failing to show a direct link to reduced drug use (Goodstadt, 1978, 1981). Raising a child's self-esteem is, after all, a complex task unlikely to be accomplished by a short-term program. Nor is it clear that children readily make the connection between broad skills in decisionmaking and their actions in specific drug pressure situations. In their desire to avoid the propaganda image that undermined early drug education efforts, educators frequently avoided any mention of drugs in the classroom, thus failing to make the connection apparent.

In contrast, programs based on the more recent social influence approach have yielded encouraging results in preventing cigarette use, reporting reductions ranging between 25 and 66 percent (Botvin and Eng, 1980, 1981, 1982; Evans et al., 1978, 1981; Flay et al., 1983; Luepker et al., 1983; Telch et al., 1982). This model addresses the major influences promoting initiation into drug use--pressure to use drugs from others, and the child's own belief that using drugs will yield positive social outcomes. Programs using this approach seek to combat these influences by equipping students with the motivation and skills to

resist pro-drug pressures (Ellickson, 1984a). Because of its promise with tobacco, the social influence approach has been incorporated into several recent drug prevention programs, and The RAND Corporation is currently conducting a major study evaluating its effectiveness.[2]

Programs using the social influence approach are behaviorally based, incorporating specific activities that help students identify where pressures to use drugs come from, develop counters to pro-drug arguments, and say "no" in pressure situations.[3] Because young adolescents have difficulty identifying the subtle ways in which they put pressure on themselves to join in--even when no one offers them a drug--the more recent programs incorporate activities that help students resist internal as well as external pressures (Ellickson, 1984b). Students also need to be motivated to resist, and these programs typically concentrate on the physical and social effects of drug use that are most important to adolescents, particularly consequences that can affect their daily lives and social relationships. They not only try to counter the attitude that "it's okay to use drugs," they also challenge the belief that "everyone's doing it" with actual statistics.

WHEN SHOULD DRUG PREVENTION EDUCATION BE OFFERED?

Many drug prevention practitioners have recently aimed at developing a prevention curriculum for children from kindergarten age through grade 12. However, school districts frequently do not have the resources for such an extensive effort, and researchers have little to say about what might work for either elementary children or high school age students. The modal age for initiation into drug use is about 13 or 14 (California Attorney General, 1986; Kandel and Logan, 1984; NIDA, 1983), which suggests that *prevention* programs for many high school students may be too late.

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[2]RAND is testing its smoking and drug prevention program, called Project ALERT, with over 7000 seventh and eighth graders from 30 California and Oregon schools (Ellickson, 1984b). The study is sponsored by the Conrad N. Hilton Foundation.

[3]For examples of smoking or drug prevention programs based on this model, see Biglan et al., 1987; Botvin, 1983; Dielman et al., 1986; Ellickson, 1984a; Flay et al., 1985; Glynn et al., 1983; Johnson, 1987; Pentz, 1983; Perry, Maccoby, and McAlister, 1980; Roberts and Fitzmahan, 1986; Schinke et al., 1986.

Junior high students, however, are developmentally and experientially ready to learn resistance skills. They have just made the transition from the more sheltered primary school environment and are beginning to make more decisions on their own, to have a broader circle of friends and acquaintances, and to experience peer pressure. This transition comes at grade seven for most children in our country, but it may arrive earlier for some socially precocious sixth graders.

But what about younger children? Don't they also need prevention education? Unfortunately, we have little evidence about what might constitute effective prevention for young children. Programs for children in the early primary grades run the risk of creating interest where none previously existed, scaring or misinforming children with unfounded fear tactics, or saturating them with so much information that they become immune to drug education by the time they reach the age when they are most "at risk" developmentally.[6]

Nevertheless, many school officials feel the need to do something for younger children. When we don't know what *might* work, our most important guideline should be to avoid harm--to ask ourselves if a particular curriculum is too sophisticated or scary for young children, if it glamorizes drugs, if it asks them to cope with concepts that they are neither cognitively nor emotionally equipped to understand.

If we want to begin drug education at early ages, we need to consider programs that avoid these pitfalls. Between kindergarten and grade three, for example, we might concentrate on general nutrition, fitness, and keeping our bodies healthy. By grades four or five, the groundwork could be laid for successful resistance by efforts to foster positive peer relationships and academic achievement. Activities enhancing appropriate assertiveness skills, self-esteem, and the ability to communicate more effectively could be targeted for this age group.

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[6]During the 1960s, many information programs relied on "scare tactics," trying to prevent drug abuse through the use of exaggerated and inaccurate descriptions of its consequences (Bukoski, 1979; Wepner, 1979). Several information programs also appeared to produce boomerang effects in the form of increased drug use (Stuart, 1974; Blum, Blum, and Garfield, 1976; Tennant, Weaver, and Lewis, 1973; Williams, DiCicco, and Unterberger, 1968).

along with introductory drug information. Although such programs have shown little effect on actual drug use in the past, they might increase the effectiveness of programs for older children by providing a behavioral base for learning specific resistance skills.

At the high school level, where drug use begins its rapid rise, choosing appropriate approaches is even more difficult. Programs based on the informational or general skills approach have fared no better with this age group than with younger students. The few social influence programs that have been evaluated have been less effective with high school students than those designed for junior high students (Johnson, 1983; Johnson et al., 1986; Perry et al., 1983). Does this mean we should give up? Definitely not. Even without clear evidence about what works, we can identify important areas of concern.

Efforts to identify and help students with drug problems need attention at both the high school and junior high levels. In addition, we cannot afford to ignore the problem of drinking and driving: Too many of our children are hurt in alcohol-related accidents, the leading cause of death among teenagers (Statistical Abstracts, 1985). Developing programs that address this issue should receive high priority. We also need to promote a climate in which drug use is viewed as socially inappropriate. Encouraging clear and consistent school rules about drug use on campus and fostering parent-school interactions that encourage drug resistance (for example, through contracts for alcohol and drug-free parties) can help make drugs the unpopular choice.

WHAT SUBSTANCES SHOULD DRUG PREVENTION TARGET?

Among young people, as well as adults, cigarettes, alcohol, and marijuana are the most widely used drugs in the United States.[5] Thus, controlling their use has the potential for helping the most children and providing the greatest benefit to society. In addition, these substances appear to be the gateway drugs: Research suggests that young people are unlikely to try marijuana if they have not already tried

[5]Drugs reflecting the highest current use for 12-17 year olds are: alcohol (31%); tobacco (16%); marijuana (12%); cocaine, amphetamines, and barbiturates (less than 2%). *NIDA, 1985 National Household Survey on Drug Abuse*, 1986.

alcohol or cigarettes and are even less likely to try other drugs if they have not tried marijuana (Donovan and Jessor, 1983; Kandel and Logan, 1984). Reducing or delaying use of these substances may therefore have spillover effects, preventing children from moving on to harder drugs.

WILL STUDENTS BE INTERESTED?

All the good intentions in the world are useless if students do not find a program credible. Drug prevention needs to take into account what we know about how students learn, how behavior is changed, and what is developmentally appropriate for the age group.

Being sensitive to the special needs of adolescents means treating them with respect, acknowledging the enormous pressures they face, validating their concerns, and recognizing that only the student himself will ultimately make the decision to refuse drugs. In particular, adolescence is a time of growing independence and a desire to appear mature. Prevention programs should acknowledge this need, while countering the belief that you have to use drugs to be "cool." Adolescents also see themselves as invulnerable and therefore discount the long-term health consequences of drug use (Gochman and Saucier, 1982). They rarely worry about the possibility of getting liver disease at age 40; they do worry about looking unattractive, performing poorly in school or sports, getting in trouble, and losing control of themselves. Hence, it is important to stress how drugs can affect young people right now--at home, at school, when they are with their friends.

It is also important to avoid glamorizing drugs. Adolescents typically believe that most of their peers use drugs when, in fact, the great majority do not (Ellickson, 1984a). We add to that misperception when we use words like "drug epidemic." Trotting out samples of drug paraphernalia frequently makes drugs look intriguing; having former addicts describe their experiences can give a double message--"drugs are bad for you but you *can* try them and stop without suffering irreversible consequences." The message we want to convey instead is that most kids don't use, and doing drugs is not a route to popularity and success.

To promote real learning, curriculum activities need to be credible and to actively engage children (Evertson, Hawley, and Zlotnick, 1984). Didactic lectures bore junior high students and scare tactics undermine credibility. A whole generation of young people reacted to the overblown propaganda of the 1960s by blocking out any information about the problems associated with marijuana. In contrast, eliciting what they know about drugs from the children themselves both avoids the lecture format and provides a base for countering myths and adding in important new information.

Credibility can also be enhanced by involving peers or older teens in program delivery. Adolescents often view older teens as more reliable sources of advice than adults (Glynn, 1981; Kandel and Andrews, 1983); older teens have the advantage of being more mature than same-age peers and potentially powerful role models for successful nonuse. Their personal examples of saying "no" not only provide graphic pictures of how to resist pressure but also convey the message that you can avoid drugs without being left out of the group.

Actively engaging students includes using activities that provide opportunities for all students to participate--eliciting information from the class, providing small group discussions, written exercises, and individual and group role-playing. In resistance training, students need repeated practice in learning how to say "no" (Bandura, 1984). Brainstorming and acting out successful solutions to different pressure scenarios helps them develop a repertoire of techniques that they can call on when faced with a real-life pressure situation. Students believe it is really difficult to withstand pressure out on the street; they need reinforcement and reassurance that they are learning the skills that will help them do so.

WHAT ASSISTANCE DOES THE TEACHER NEED?

Even exemplary programs can fail if they are left on the shelf, given lip-service only, or radically altered from their original design (Berman and McLaughlin, 1979; Pressman and Wildavsky, 1973). If teachers lack the motivation or assurance to use a curriculum in the classroom, they are unlikely to make it come alive. What support do they need?

Most important of all, teachers need to be involved in the decision to adopt drug prevention programs and to know that district officials fully back drug prevention in the schools. They also need well-designed curricula that specify program goals, clearly describe the purpose of each activity and how it works, and provide attractive, easy to use materials that are supplemented by background information for the teacher. Teacher training plays an important role in helping educators feel comfortable with program content and with the nonjudgmental, facilitative style required for eliciting active student participation.

PLANNING FOR THE FUTURE

School districts can provide a solid base for effective drug prevention by choosing curricula that are based on what we know about how children start using drugs, how they learn, and what is developmentally appropriate for different age groups. Our research suggests giving the greatest attention to programs for grades six through eight that help students identify the pressures to use drugs and develop the motivation and skills to resist those pressures. However, drug prevention is a difficult undertaking, and we still have much to learn about it. No single approach carries a guarantee of success nor do we have answers to many questions about what works, for whom, and under what conditions. Hence, evaluating our efforts is crucial, both to find out whether our money has been wisely spent and to learn how to improve programs for future generations. Developing a balanced approach to prevention means choosing promising prevention models and assessing their results.

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